Student: Claire Whitehead

Title: Frailty in older patients referred to Oncology, and impact of treatment

Supervisors: Professor Bridget Robinson, Dr Dean Harris, Ruth Gerring

Sponsor: Healthcare of the Elderly Education Trust

Introduction: The elderly are a diverse group, and with the baby boomers now into retirement age, this population is increasing. Although no definitive age where someone becomes elderly, WHO suggests that 65 years seems to be the most accepted. But, as people are living longer with varying health status, this may not be as accurate as it once was. For example some people may have deceased, some may be frail and some may still be working full time by 75 years. So, when being involved in the healthcare needs of the elderly, it is important to understand that a one size fits all approach is not always best.

Frailty is another definition often applied to the older population. Frailty is defined as a vulnerable health condition that results from a decreased ability to respond to a stressor that is associated with a higher vulnerability of functional decline, disability, hospitalisation and mortality. In an Oncology setting, frailty can be used as an effective outcome of treatment for the older population.

Oncology treatments aim to improve the quality and/or quantity of life. This can often be a subjective measure and rely heavily on self-report. Becoming frail is one such outcome that is important in a patient's response to treatment. Being able to predict which patients become frail to what treatments could help not only guide treatment options, but also allows a more informative approach to treatment.

Aim: To establish how many people aged 75 years and over are frail in their first appointment and how many become frail over the next 3 months and over the next 6 months.

Impact: To determine if health status can be used to predict onset of frailty. This will allow treatment options to be tailored better towards specific patients needs.

Method: A retrospective audit was conducted on all people 75 years and older referred to medical oncology between 1 June 2016 and 1 June 2017. Patients were identified through Mosaiq (the electronic Oncology database in Christchurch Hospital). All patients over 74 years who had been recorded as having an initial appointment in Medical Oncology were included. A search of patient records was completed in order to gain demographic data, disease status, treatment, general health, G8 score (measuring specific oncology outcomes including weight, appetite and mobility), health status (subdivided into deceased, less well, improved and stable) and clinical outcome at 3 and 6 months after the initial appointment. Data was recorded in an anonymised excel spreadsheet for analysis.

Results: Initially 350 patients were identified using Mosaiq. Forty-five participants were excluded if an initial appointment had been made but the patient was not seen due to death prior to appointment, worsening symptoms, cancellation, etc. The participants were distributed into under 80 years (48.9%), 80-84 years (36.1%) and over 84 years (15.1%). The group was 51.1% male and 48.9%, 95.7% New Zealand European, 2.3% NZ Maori, 1.3% Asian and 0.7% Other. The leading cancer diagnoses were Colorectal (29.5%), Breast (10.2%), and Lung (9.8%). The G8 was unable to be utilised in 28 cases as not all data required to calculate a score was recorded, especially BMI and weight change, appetite and neuropsychological problems. So, neuropsychological problems and appetite were removed and a G6 score derived, with a score<10 defined as frail. Fifty were lost to follow up, giving a final population of 227 participants. At baseline the G6 score categorized participants into 'frail' or 'not frail' depending on their overall score. The demographic results were analysed for frequency and significance at baseline (first appointment in Medical Oncology). As frailty was the main outcome, the G6 score was compared at 3 months and then 6 months from

initial appointment. From this, 61% were considered ‘frail’ and 39% were considered ‘not frail’ at baseline. At follow up their clinical health status was reported according to their frailty status at baseline, and at 3 and 6 months. At 3 months follow up, 41.5% of those classed as ‘frail’ were deceased or less well compared to 19.6% of those classed as ‘not frail’. Also at 3 months, 58.5% of those ‘frail’ and 80.4% of those ‘not frail’ were stable or improved. At 6 months follow up 62.7% ‘frail’ and 22.9% ‘not frail’ were deceased or less well, compared with baseline status, while 37.2% ‘frail’ and 77% of ‘not frail’ who were improved or stable at 6 months. Further analysis will explore associations of baseline frailty and health outcomes with cancer type, stage and treatment.

Conclusion: Frailty is of concern in the elderly, especially when it comes to potential oncology treatments. People aged 75 and over are of varying abilities both physically and cognitively, which can affect treatment outcomes. It is important that these patients are given the appropriate treatment to both their oncology diagnosis and their own personal abilities. This study showed that those who were frail when first seen in medical oncology had worse outcomes than those who were not frail at 3 and 6 month follow up. However, not every person ‘frail’ initially deteriorated over 3-6 months. With 45% of patients overall becoming frail, this gives an insight into how to tailor treatment.